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XII. *Observations on some of the Plants in New-England, with remarkable Instances of the Nature and Power of Vegetation. In a Letter to the Publisher from the Honourable Paul Dudley, Esq; F. R. S.*

THE Society, without Doubt, have long since been acquainted, that the Plants of *England*, as well those of the Fields and Orchards, as of the Garden, that have been brought over hither, suit mighty well with our Soil, and grow here to great Perfection; however, that the curious may better make a Comparison, I shall single out some Particulars, of my own Observation.

To begin with the Fruit Trees.

Our Apples are, without Doubt, as good as those of *England*, and much fairer to look to, and so are the Pears; but we have not got of all the Sorts.

Our Peaches do rather excel those of *England*, and then we have not the Trouble or Expence of Walls for them; for our Peach Trees are all Standards, and I have had, in my own Garden, seven or eight Hundred fine Peaches of the Rare-ripes, growing at a Time on one Tree.

Our People, of late Years, have run so much upon Orchards, that in a Village near *Boston*, consisting of about forty Families, they made near three Thousand Barrels of Cyder. This was in the Year 1721. And; in another Town of two Hundred Families, in the same Year, I am credibly inform'd, they made near ten Thousand Barrels. Some of our Apple Trees, will make six, some have made seven Barrels of Cyder, but this is not common; and the Apples will yield from
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seven, to nine Bushels for a Barrel of Cyder. A good Apple Tree, with us, will measure from six to ten Foot in Girt. I have seen a fine Pearmain, at a Foot from the Ground, measure ten Feet, and four Inches round. This Tree, in one Year, has bore thirty eight Bushels, (by Measure) of as fine Pearmain, as ever I saw in *England*. A *Kentish* Pippin at three Foot from the Ground, seven Foot in Girt; a Golden Russet in six Foot round. The largest Apple Tree, that I could find, was ten Foot and six Inches round, but this was no Graft.

Pear Trees.

An *Orange* Pear Tree grows the largest, and yields the fairest Fruit. I know one of them near forty Foot high, that measures six Foot and six Inches in Girt, a Yard from the Ground, and has bore thirty Bushels at Time; and this Year I measur'd an *Orange* Pear, that grew in my own Orchard, of eleven Inches round the Bulge. I have a Warden Pear Tree, that measures five Foot six Inches round. One of my Neighbours has a *Bergamot* Pear Tree, that was brought from *England* in a Box, about the Year 1643, that now measures six Foot about, and has bore twenty two Bushels of fine Pears in one Year. About twenty Years since, the Owner took a Cyon, and grafted it upon a common Hedge Pear, but the Fruit does not prove altogether so good, and the Rind, or Skin, is thicker than that of the Original.

Peach Trees.

Our Peach Trees are large and fruitful, and bear commonly in three Years from the Stone. I have one in my Garden of twelve Years Growth, that measures two Foot and an Inch in Girt, a Yard from the Ground, which

which, two Years ago, bore me near a Bushel of fine Peaches. Our common Cherries are not so good as the *Kentish* Cherries of *England*, and we have no Dukes, or Heart Cherries, unless in two or three Gardens.

Trees of the Wood.

Some Years since, I measur'd a *Platanus Occidentalis*, or *Button Wood* Tree (as they are called here) of nine Yards in Girt, and it held its Bigness a great Way up. This Tree, when it was cut down, I am inform'd, made twenty two Cord of Wood. A Gentleman tells me, that in the Forest, he met with a streight Ash, that grew like a Pillar, of a great Height, and free from Limbs, that measured fourteen Feet eight Inches round, near a Yard from the Ground; and, the other Day, I met with a *Sassafras* Tree, that measur'd five Foot three Inches in Girt. I meddle not here with our noble Pines and Cedars, because I design to treat of them in a Chapter of the Evergreens of this Country. Among our Trees of quick and easy Growth, the *Button Wood* before-mentioned, and the *Locust* Tree, are the most remarkable: As to the latter, by the Description Mr. *Moore*, while in *New-England*, gave me of the *Manna* Tree, our *Locust* Tree may be called the *American Manna*. I have known a Seed of it blown off from the Tree into my Garden, that took Root of itself, and, in less than two Years, was got above six Foot high, and as big about, as a common walking Cane. The *Platanus* I have frequently propagated, by cutting off Sticks of five or six Foot long, and setting them a Foot deep into the Ground in the Spring of the Year, when the Season is wet; they thrive best in a moist Soil.

Garden.

Garden.

An Onion, set out for Seed, will rise to four Foot nine Inches in Height. A Parsnip will reach to eight Foot, red *Orrice* will mount nine Foot, white *Orrice* eight. In the Pastures, I measured Seed *Mullen* nine Foot two Inches in Height, and one of the common Thistles above eight Foot.

Vegetation.

Among the remarkable Instances of the Power of Vegetation, I shall begin with an Account of a Pumpkin Seed, which I have well attested, from a worthy Divine. * The Relation is as follows: That in the Year 1699, a single Pumpkin Seed was accidentally dropp'd in a small Pasture where Cattle had been fodder'd for some Time. This single Seed took Root of itself, and without any Manner of Care or Cultivation; the Vine run along over several Fences, and spread over a large Piece of Ground far and wide, and continued its Progress till the Frost came and kill'd it. This Seed had no more than one Stalk, but a very large one; for it measured eight Inches round; from this single Vine, they gathered two hundred and sixty Pumpkins; and, one with another, as big as an half Peck; enough in the Whole, to fill a large Tumbrel, besides a considerable Number of small and unripe Pumpkins, that they made no Account of. The *Philosophical Transactions* give an Account of a single Plant of Barley, that by steeping and watering with *Salt-Petre* dissolv'd in Water, produced two hundred and forty nine Stalks, and eighteen thousand Grains; but then there was

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* The Reverend Mr. Edwards of Windsor.

Art, and even Force in that Case; whereas in ours, there was nothing but pure Nature and Accident.

Our *Indian* Corn is the most Prolifick Grain that we have, and commonly produces twelve hundred, and often two thousand Grains from one; but the fairest Computation is thus; six Quarts of this Grain will plant an Acre of Ground, and it is not unusual for an Acre of good Ground to produce fifty Bushels of Corn. The Mention of *Indian* Corn obliges me to take notice of an extraordinary *Phænomenon* in the Vegetation of that Grain, *viz.* the interchanging, or mixing, of Colours after the Corn is planted. For your better understanding this Matter, I must observe, that our *Indian* Corn is of several Colours, as blue, white, red, and yellow; and if they are planted separately, or by themselves, so that no other Sort be near them, they will keep to their own Colour, *i. e.* the blue, will produce blue, the white, white, &c. But if in the same Field, you plant the blue Corn in one Row of Hills (as we term them) and the white, or yellow, in the next Row, they will mix and interchange their Colours; that is, some of the Ears of Corn, in the blue Corn Rows, shall be white, or yellow; and some again, in the white or yellow Rows, shall be of a blue Colour. Our Hills of *Indian* Corn are generally about four Foot asunder, and so continued in a streight Line, as far as the Field will allow; and then a second Line, or Row of Hills, and so on; and yet this mixing and interchanging of Colours has been observed, when the Distance between the Rows of Hills, has been several Yards; and a worthy Clergyman, of an Island in this Province, * assures me, that the blue Corn has thus communicated, or exchanged, even at the Distance of four or five Rods; and

* The Reverend Mr. Mayhew, of Martha's Vineyard.

and, particularly in one Place, where there was a broad Ditch of Water betwixt them. Some of our People, but especially the *Ab-Origines*, have been of Opinion, that this Commixtion, and Interchange, was owing to the Roots, and small Fibres reaching to and communicating with one another; but this must certainly be a Mistake, considering the great Distance of the Communication, especially at some Times, and cross a Canal of Water; for the smallest Fibres of the Roots of our *Indian* Corn, cannot extend above four or five Foot. I am therefore humbly of Opinion, that the *Stamina*, or Principles of this wonderful Copulation, or mixing of Colours, are carried thro' the Air by the Wind; and that the Time, or Season of it, is, when the Corn is in the Earing, and while the Milk is in the Grain, for at that Time, the Corn is in a Sort of Estuation, and emits a strong Scent. One Thing, which confirms the Air's being the Medium of this Communication of Colours in the Corn, is an Observation of one of my Neighbours, that a close, high board Fence, between two Fields of Corn that were of a different Colour, entirely prevented any Mixture or Alteration of Colour, from that they were planted with.

It has been observ'd by Naturalists, that even Nature, which gives Laws to every Thing, does not always strictly observe her own Rules; and I think, I have, in my own Town, met with a very notable Instance of this in the Vegetable World.

An Apple Tree there bears a considerable Quantity of Apples, especially every other Year, which never had a Blossom; I had formerly heard the Owner speak of it: But for the three last Years, I made it my Business, in the proper Season, to go and observe it my self; and when all the rest of the Orchard was in the Bloom, this Tree had not one Blossom. Not being contented with once going, I went again, and again, till I found the young

Apples perfectly formed. The last Year, I went early, not knowing but that it might blow sooner than the other Trees, but I found no Blossoms ; and the Owner, with many of his Neighbours, assured me, they have known the Tree these forty Years, and that it never had a Blossom. I opened several of the Apples, and observ'd but very few Seeds in them ; and some of them lodged single in the Side of the Apple. This Tree was no Graft, and the Fruit but ordinary for Taste. I could not perceive, by my Observation, but that, in all other Respects, it fructify'd like other Apple Trees. But that I may not leave Nature in any Disorder, I would just mention, what is frequently observ'd in our Gardens, as to the winding or running Vines, more especially the Hop, and the *French*, or Kidney Beans ; how contrary they are to one another in their climbing, and yet how steadily they observe their own Laws : The Hop Vine winding about the Pole with the Sun, and the Bean against the Sun ; and this Course they keep with such Obstinacy, that though an Attempt has been made over Night, to force the Hop Vine to wind against the Sun ; yet, in the Morning, it has got back again to its natural Course, and the Bean again has done the same in her Way. In like Manner, the *Indian* Corn, abovementioned, has always an equal Number of Rows of Grain on the Ear, as eight, twelve, &c.

F I N I S.

E R R A T A.

Philos. Transact. N^o. 383.

PAG. 94. N^o 77. l. Ki—tsai—tsè. P. 95. N^o 95 pro Germanicæ
l. l. Gerardi. Ibid. N^o 98. l Vicia Sylvestris, &c.